

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently amended) A method comprising the steps of:
overmolding a coil to an actuator to attach said coil to said actuator via an
intervening overmold material, wherein the overmold material has at least one localized area of reduced thickness along the joint connecting the coil to the actuator; and
disposing an adhesive in at least one adhesive receptacle defined in the overmold material so that the adhesive contactingly engages the coil and the actuator to increase a vibrational stiffness response of the actuator and the coil, wherein said disposing step is executed after said overmolding step.
2. (Original) A method, as claimed in Claim 1, wherein:
said overmolding step comprises forming a first overmolded part that is attached to each of said actuator and said coil by said overmolding step.
3. (Previously presented) A method, as claimed in Claim 2, wherein:
said overmolding step further comprises forming a bobbin from an additional amount of the overmold material that is attached to said coil by said

overmolding step, wherein said coil is disposed about at least part of said bobbin.

4. (Original) A method, as claimed in Claim 1, wherein:

said overmolding step comprises forming a first overmolded part and providing a first stiffness for an interconnection of said first overmolded part to at least one of said actuator and said coil, and wherein said disposing step comprises providing a second stiffness for said interconnection, wherein said second stiffness is greater than said first stiffness.

5. (Original) A method, as claimed in Claim 1, wherein:

said overmolding step comprises disposing said coil and said actuator in a mold, wherein said method further comprises the step of removing said actuator from said mold after said overmolding step and thereby with said coil being attached to said actuator, and wherein said disposing step is executed after said removing step.

6. (Original) A method, as claimed in Claim 5, wherein:

said disposing step is executed without any fixtures to retain said coil in a predetermined position relative to said actuator.

7. (Currently amended) A method, as claimed in Claim 1, wherein:

said overmolding step comprises forming a first overmolded part and forming a first adhesive receptacle in said first overmolded part, wherein said disposing step is executed only within said first adhesive receptacle.

8. (Currently amended) A method, as claimed in Claim 7, wherein:

said first overmolded part structurally joins said actuator with said coil by an annular overmolding region and at least one adhesive attachment region, wherein the overmolding region and the adhesive attachment region comprise a thickness of the coil.

9. (Original) A method, as claimed in Claim 8, wherein:

said forming a first adhesive receptacle step comprises disposing said first adhesive receptacle on a perimeter of said first overmolded part.

Claims 10-12 (Cancelled).

13. (Original) A method, as claimed in Claim 7, wherein:

said coil comprises a coil opening, wherein said first overmolded part is disposed within said coil opening and is attached to said coil.

14. (Original) A method, as claimed in Claim 13, wherein:

said adhesive within said first adhesive receptacle attaches to both said first overmolded part and said coil.

15. (Original) A method, as claimed in Claim 1, wherein:

said overmolding step comprises forming a first overmolded part, forming at least one said adhesive receptacle in said first overmolded part, forming a second overmolded part, and forming at least one said adhesive receptacle in said second overmolded part, wherein said first overmolded part is disposed between and is attached to each of said actuator and said coil by said overmolding step, wherein said coil is disposed about at least part of said second overmolded part and is attached to said second overmolded part by said overmolding step, wherein said adhesive in at least one said adhesive receptacle is attached to at least said actuator and said first overmolded part, wherein said adhesive in at least one said adhesive receptacle is attached to at least said first overmolded part and said coil, and wherein said adhesive in at least one said adhesive receptacle is attached to both said coil and said second overmolded part.

16. (Original) A method, as claimed in Claim 1, further comprising the step of:

wicking said adhesive into a space after said disposing step.

17. (Currently amended) A method comprising the steps of:

disposing a coil and an actuator in a mold;

executing a first molding step comprising molding a first molded part that

structurally joins said coil to said actuator, wherein said first molding step is executed within said mold;

executing a second molding step comprising molding a bobbin that structurally joins
said coil to said bobbin, wherein coil is disposed about at least part of said
bobbin, and wherein said second molding step is also executed within said
mold;

forming at least one adhesive receptacle in at least one of said first molded part or
said bobbin during at least one of said first and second molding steps,
wherein the overmold material has at least one localized area of reduced
thickness along the joint connecting the coil to the actuator and the joint
connecting the bobbin to the coil ;

removing said actuator, said first molded part, said coil, and said bobbin from said
mold as a single unit after completion of said first and second molding steps;
and

disposing an adhesive in said at least one adhesive receptacle after said removing
step to further adjoin the bobbin to the coil or the first molded part to the
actuator to increase a vibrational stiffness of said single unit.

18. (Original) A method, as claimed in Claim 17, wherein:
said first and second molding steps are executed simultaneously.

19. (Original) A method, as claimed in Claim 17, wherein:
said first and second molding steps each comprise overmolding.

20. (Original) A method, as claimed in Claim 17, wherein:

said disposing step comprises increasing a stiffness of at least one of first and second interconnections, wherein said first interconnection is between said actuator and said coil, and wherein said second interconnection is between said coil and said bobbin.

21. (Original) A method, as claimed in Claim 17, wherein:

said disposing step is executed without any fixtures to retain said coil in a predetermined position relative to said actuator.

22. (Original) A method, as claimed in Claim 17, wherein:

said forming at least one adhesive receptacle step comprises a first adhesive receptacle that intersects with a joint defined in part by one of first molded part and said bobbin.

23. (Original) A method, as claimed in Claim 22, wherein:

said first adhesive receptacle intersects with a joint between said first molded part and said actuator.

24. (Original) A method, as claimed in Claim 22, wherein:

said first adhesive receptacle intersects with a joint between said first molded part and said coil.

25. (Original) A method, as claimed in Claim 22, wherein:

said first adhesive receptacle intersects with a joint between said first molded part and said actuator, as well as with a joint between said first molded part and said coil.

26. (Original) A method, as claimed in Claim 22, wherein:

said first adhesive receptacle intersects with a joint between said bobbin and said coil.

27. (Original) A method, as claimed in Claim 17, wherein:

said forming at least one adhesive receptacle step comprises forming a plurality of said adhesive receptacles, wherein said adhesive in at least one said adhesive receptacle is attached to at least said actuator and said first overmolded part, wherein said adhesive in at least one said adhesive receptacle is attached to at least said first overmolded part and said coil, and wherein said adhesive in at least one said adhesive receptacle is attached to both said coil and said bobbin.

28. (Original) A method, as claimed in Claim 17, wherein:

said forming at least one adhesive receptacle step comprises a first adhesive receptacle that intersects with a first joint between said actuator and said first molded part, as well as with a second joint between said first molded part and said coil, and wherein said forming at least one adhesive receptacle step

further comprises forming a second adhesive receptacle that intersects with a second joint between said bobbin and said coil.

29. (Currently amended) A method comprising the steps of:

employing an initial overmolding operation to attach a coil to an actuator via an

overmolding material while forming an adhesive receptacle in said material,

wherein the overmold material has at least one localized area of reduced

thickness along the joint connecting the coil to the actuator; and

subsequently filling the adhesive receptacle with an adhesive to further attach said

coil to said actuator and increase a vibrational stiffness response associated

with the actuator, wherein the adhesive contactingly engages the coil and the

actuator.

30. (Currently amended) A method, as claimed in Claim 29, wherein:

the employing step comprises providing a first stiffness for an interconnection of

said actuator to said coil, and wherein the subsequently filling step ~~step~~

comprises providing a second stiffness for said interconnection of said

actuator to said coil, wherein said second stiffness is greater than said first

stiffness.

31. (Currently amended) A method, as claimed in Claim 29, wherein:

the subsequently filling step comprises flowing the adhesive into a notch in the

actuator which communicates with the adhesive receptacle.

32. (Previously presented) A method, as claimed in Claim 31, wherein:

said overmolding operation comprises forming a first overmolded part that is
attached to each of said actuator and said coil.

33. (Previously presented) A method, as claimed in Claim 31, wherein:

said overmolding operation comprises forming the adhesive receptacle in said first
overmolded part.

34. (Previously presented) A method, as claimed in Claim 33, wherein:

the employing step comprises forming a plurality of discrete adhesive receptacles in
the overmold material, and wherein the subsequently filling step comprises
filling each of the plurality of discrete adhesive receptacles with a separate
volume of adhesive that respectively contactingly engages the coil and the
actuator and does not contactingly engage any other said separate volume of
adhesive.

35. (Previously presented) A method, as claimed in Claim 33, wherein:

the employing step further comprises employing the initial overmolding operation to
additionally form a coil bobbin within and directly attached to an interior
circumferential extent of the coil from an additional volume of said
overmolding material, said overmolded coil bobbin comprising a second
adhesive receptacle; and

the subsequently filling step further comprises filling the second adhesive receptacle with an additional volume of said adhesive to further attach the coil bobbin to the coil.

Claim 36 (Cancelled).

37. (Currently amended) A method comprising the steps of:

employing an initial overmolding operation to attach a voice motor coil to a bobbin via an overmolding material while forming an adhesive receptacle in said material, wherein the overmold material has at least one localized area of reduced thickness along the joint connecting the coil to the bobbin; and subsequently filling the adhesive receptacle with an adhesive to attach said bobbin to said coil and increase a vibrational stiffness response associated with the bobbin, wherein the adhesive contactingly engages the coil and the bobbin.

38. (Previously presented) A method, as claimed in Claim 37, wherein:

the employing step comprises forming a plurality of discrete adhesive receptacles in the overmold material, and wherein the subsequently filling step comprises filling each of the plurality of discrete adhesive receptacles with a separate volume of adhesive that respectively contactingly engages the coil and the bobbin and does not contactingly engage any other said separate volume of adhesive.

39. (Previously presented) A method, as claimed in Claim 37, wherein:

the employing step further comprises employing the initial overmolding operation to

 additionally attach the coil to an actuator using an additional volume of said

 overmolding material, said additional volume of said overmolding material

 comprising a second adhesive receptacle; and

the subsequently filling step further comprises filling the second adhesive receptacle

 with an additional volume of said adhesive to further attach the coil bobbin

 to the coil.

Claims 40-51 (Cancelled).